

ABSTRACT OF THE DISCLOSURE

The present invention relates to a CCD solid state image sensor of a scanning read-out type and to a drive method thereof as well as an image pick-up method and the image pick-up device, particularly in which a plurality of vertical CCD columns can be assigned to one electric-charge detection unit with the small number of wiring.

In the present invention, adjacent columns of the vertical CCDs are assigned to one electric-charge detection unit. Further, the stages of the voltage transfer between the vertical CCD column and a voltage detection unit is made different; the electrode arrangement is devised; or the drive timing is adjusted.

Accordingly, the phase of electric-charge transfer with respect to the plurality of adjacent vertical CCD columns, when the horizontal electric-charge at the same position in the direction of the row obtained by the photo-conductive units is made to reach the electric-charge detection unit, becomes different.